Project Update: February 2017

In the second half of October 2016, we conducted the short field survey (it lasted 2 days) in surroundings of Kraljevo where, according to the plan, we measured snakes, took tissue for DNA analysis and mapped the habitats. These were particularly important findings because we took the data about snakes just before their hibernation. Apart from these activities, we gave lecture to elementary school ''Jovan Dučić'' in Kraljevo.

As our field activities finished due to viper's hibernation, we analysed our data and wrote the report which included population data analysis and evaluation of threats for nose-horned viper. We send this report to Institute for Nature Conservation in Serbia in order to help authorities in further conservation actions dedicated to this species. We also presented our report at Institute for Biological Research „Siniša Stanković" University of Belgrade and at Faculty of Science and Mathematics in Niš. We also submitted one paper for peer-review journal with Rufford Foundation mentioned in the acknowledgements and we are in the process of writing one more paper where Rufford Foundation will be also mentioned. Here we present main conclusions from collected data:

Population data

The biggest estimated population size is obtained for population in surroundings of Kraljevo. Sex ratio in the sample was 2:1 in favour of males. Males were more detectable in spring (78% were males). In summer and autumn detectability for both sexes was equal. We also collected data about two newborn juveniles from this year (one from surroundings of Krupanj and other from surroundings of Svilajnac) and these specimens are going to be very valuable in further studies (as we marked them and hope to recapture them next season). Among other morphometric data we analysed head width and this character varied among populations; the largest was for the specimens from population inhabiting surroundings in Krupanj and the smallest was was for the specimens from population inhabiting surroundings in Svilajnac. This result could reflect difference in food resources. We calculated body condition index which is a measure that indicates animal's health and it showed seasonal variation (the highest was in autumn and the lowest was in spring).

Habitat requirements

Our sampled individuals preferred edges of oak forest with exposition to the south. There were no sex differences and age differences in habitat preference. All habitats and environmental variables are mapped.

Threats

1. Deliberate killing. Unfortunately, we documented deliberate killing of nose-horned viper in Jelašnička Gorge and in surroundings of Svilajnac.
2. Habitat fragmentation and degradation. Unfortunately, 70% of habitats were polluted with human waste. Also, most habitats were fragmented with roads. We found one case of road kill in surroundings of Kraljevo.
3. Harvesting. As we stated in our last report, in Krupanj we located population were this viper is harvested for venom supply and our future genetic analyses will show are there any impact of this threat on genetic variability or effective size of the population. Body condition index for specimens from this population was low.
4. Questionnaire. About half of the interviewed local inhabitants stated that they are afraid of snakes; about one fifth of local inhabitants stated that they deliberately killed nose-horned vipers in the past. One third of local inhabitants believe in local myth that nose-horned viper ''jump and attack humans'', one third of people does not know if this folklore is true and one third know that this is not true. Unfortunately, we believe that this is the main reason why people are afraid of this viper and therefore, deliberately kill them.

Fig.1. Nose-horned viper in its habitat

Fig.2. Lecture at primary school in Kraljevo

Fig.3 Lecture at primary school in Kraljevo

Fig.4 Reporting project results at Institute for Biological Research

Fig. 5. Reporting project results at Institute for Biological Research

Fig.6 Reporting project results at Faculty of Science and Mathematics in Nis

Fig.7 Reporting project results at Faculty of Science and Mathematics in Nis